



Contribution ID: 59

Type: **contributed talk**

## The use of thermal cameras as a diagnostic tool in the qualification of LGAD designs

*Tuesday, 18 February 2020 16:20 (20 minutes)*

The Hamamatsu ORCA2 C11090-22B is a EM-CCD camera working with visible light, able to perform Ultra-Low Light Imaging. In this contribution, we will show how such a camera can be employed to study the breakdown of Silicon detectors by looking at their "hot spots", namely regions of a device that emit visible photons because of the high current densities flowing through them. We performed measurements on LGADs with different design strategies of the inter-pad region, aiming to reduce the size of the no-gain area between pads. The camera allows determining those parts of the structures where a high density of current concentrates, helping us understand the cause of sensor's premature breakdown. This visualization is a very good tool to pinpoint design choices that might lead to unwanted sensors' characteristics

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**Session Classification:** LGAD and Timing

**Track Classification:** hybrid sensors (3D, LGAD)